



DOI: 10.14744/eer.2025.52244  
Eur Eye Res 2025;5(2):152–155

EUROPEAN  
**EYE**  
RESEARCH

## CASE REPORT

# I had an intravitreal injection; my eyes are blurry, why?

 **Esra Arican,<sup>1</sup>**  **Furkan Alyoruk,<sup>2</sup>**  **Kardelen Tas,<sup>2</sup>**  **Aygen Yaman,<sup>2</sup>**  **Ismail Ersan<sup>2</sup>**

<sup>1</sup>Department of Ophthalmology, Gerede State Hospital, Bolu, Türkiye

<sup>2</sup>Department of Ophthalmology, Onsekiz Mart University, Çanakkale, Türkiye

### Abstract

Anterior chamber migration of dexamethasone implants is a rare complication, particularly observed in patients with posterior capsule rupture during cataract surgery. We present a case report of a 63-year-old female with a history of diabetes who underwent complicated cataract surgery resulting in posterior capsule perforation and subsequent anterior chamber migration of the dexamethasone implant. Clinical examination revealed minimal corneal edema and mild anterior chamber reaction. The implant was successfully removed via a corneal incision under local anesthesia. Literature review indicates various risk factors contributing to implant migration, with surgical removal or repositioning being the preferred management strategies. Our case underscores the importance of recognizing this rare complication and highlights the need for prompt intervention to prevent potential ocular complications. Surgeons should remain vigilant for anterior chamber migration, especially in patients with posterior capsule defects, following dexamethasone implantation.

**Keywords:** Anterior migration; intravitreal injection; surgery; dexamethasone implant.

Dexamethasone implant is a biodegradable, preservative-free, 0.7 mg sustained-release, intravitreal preparation (Ozurdex®, Allergan, Inc., Irvine, CA, USA) indicated for patients with retinal vein occlusion, non-infectious posterior uveitis, and diabetic macular edema.<sup>[1-3]</sup> Increased intraocular pressure and cataract formation are the most common implant-related side effects.<sup>[4,5]</sup> In addition, migration to the anterior chamber due to the injection route of the implant is a complication mentioned in the literature.<sup>[6-8]</sup>

In this case report, we aimed to present the diagnosis and treatment of an anterior chamber dexamethasone implant presenting with a mild anterior chamber reaction.

### Case Report

A 63-year-old female patient presented to us due to decreased vision. Best corrected visual acuities were found to be 20/40 and 20/50 in the right and left eyes, respectively. Intraocular pressures were within normal limits. Bilateral cortical nuclear cataracts were observed upon biomicroscopic examination. The anterior chamber and cornea were clear. Fundus examination revealed no findings except for mild changes in the retinal pigment epithelium. The patient had a known history of diabetes and had been receiving oral antidiabetic treatment for 5 years. However, no signs of diabetic retinopathy were observed. Optical coherence tomography (OCT) showed



**Cite this article as:** Arican E, Alyoruk F, Tas K, Yaman A, Ersan I. I had an intravitreal injection; my eyes are blurry, why? Eur Eye Res 2025;5(2):152–155.

**Correspondence:** Esra Arican, M.D. Department of Ophthalmology, Gerede State Hospital, Bolu, Türkiye

**E-mail:** esra250043@hotmail.com

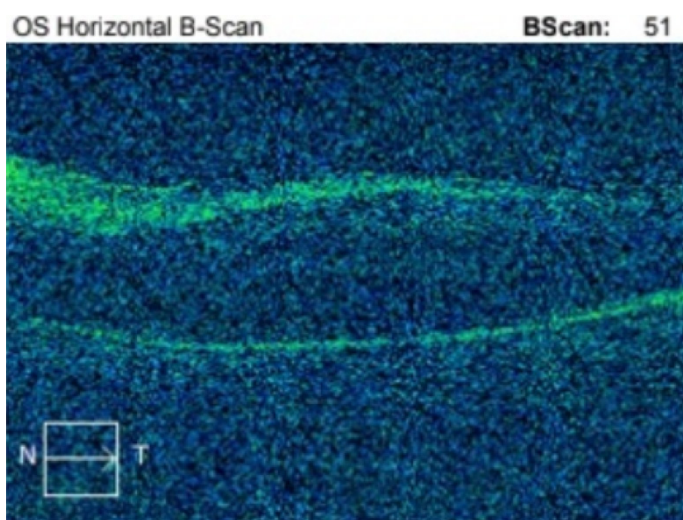
**Submitted Date:** 14.10.2024 **Revised Date:** 24.02.2025 **Accepted Date:** 17.03.2025 **Available Online Date:** 26.08.2025

**OPEN ACCESS** This is an open access article under the CC BY-NC license (<http://creativecommons.org/licenses/by-nc/4.0/>).

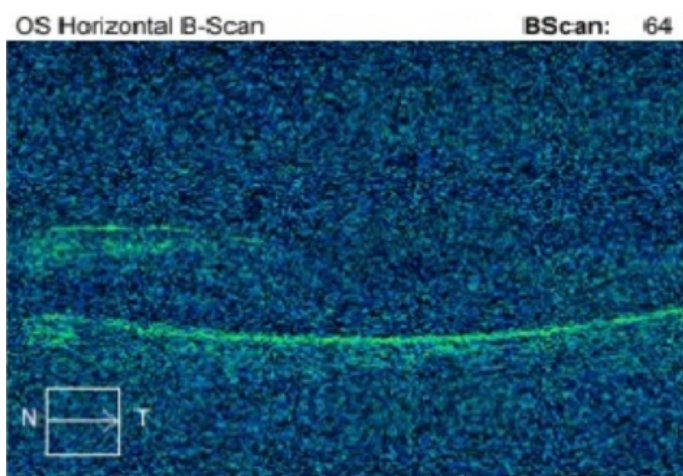


normal macular appearance. There was no history of previous intraocular surgery or intravitreal injections. The patient underwent left cataract surgery. Posterior capsule rupture was observed during the operation. After anterior vitrectomy, secondary intraocular lens (IOL) implantation was performed using scleral fixation. Post-operatively, the left eye had a visual acuity of 20/100 and intraocular pressure was 11 mmHg. OCT showed serous macular detachment and diffuse macular edema (Fig. 1). Subtenon triamcinolone acetate was administered and nepafenac eye drops were started 4 times daily, considering pseudophakic cystoid macular edema (Irvine-Gass syndrome). Upon follow-up examination, the intraocular pressure was 12 mmHg and visual acuity was counting fingers at 2 m. The patient received a dexamethasone implantation as a treatment for

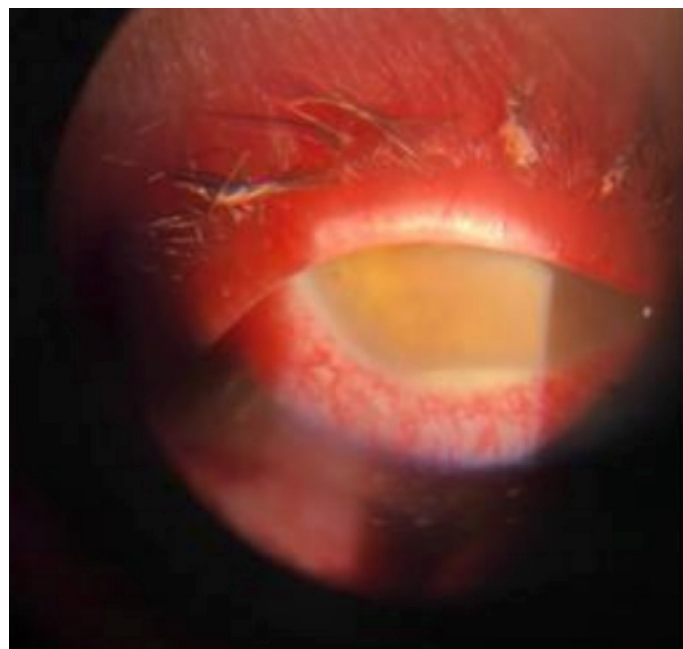
persistent macular edema. At the 3<sup>rd</sup>-week post-injection follow-up assessment improvement in serous macular detachment and macular edema was observed on OCT (Fig. 2). Biomicroscopic examination revealed minimal corneal edema and a dexamethasone implant in the inferior anterior chamber (Fig. 3). Under local anesthesia, a superotemporal entry was made with a 2.8 mm blade, and the implant was mobilized from the anterior chamber toward the main incision with the assistance of viscoelastic and then removed from the incision (Fig. 4). Intracameral



**Fig. 1.** Post-operatively, the left eye had a visual acuity of 0.15 and intraocular pressure was 11 mmHg. Optical coherence tomography showed serous detachment and diffuse edema.



**Fig. 2.** At the 3<sup>rd</sup>-week post-injection follow-up assessment, improvement in serous macular detachment and macular edema was observed on optical coherence tomography.



**Fig. 3.** Biomicroscopic examination revealed minimal corneal edema and a dexamethasone implant in the inferior anterior chamber.



**Fig. 4.** Under local anesthesia, a superotemporal entry was made with a 2.8 mm blade, and the implant was mobilized from the anterior chamber toward the main incision with the assistance of viscoelastic and then removed from the incision.

antibiotic injection was given to the anterior chamber, and the procedure was concluded after stromal hydration. At the post-operative 1<sup>st</sup>-day examination, the patient's visual acuity in the left eye was measured as 20/50, and the intraocular pressure was 11 mmHg. Biomicroscopic examination revealed a quiet anterior chamber and a flat retina. The patient continued follow-up examinations at another clinic; therefore, subsequent follow-up appointments could not be accessed.

## Discussion

The migration of a dexamethasone implant into the anterior chamber is a rarely observed complication. In a multicenter study, patients who received dexamethasone implant injections were screened, and the rate of anterior chamber migration was found to be 1.6%.<sup>[9]</sup> This migration was notably linked to factors such as cataract surgery, vitrectomy, and the condition of the lens. They specifically associated anterior chamber migration with cataract surgery, vitrectomy, and lens status.<sup>[9]</sup> In the literature, Pardo-López et al.<sup>[10]</sup> were the first to describe the migration of a dexamethasone implant into the anterior chamber in patients who had received an iris-claw IOL after vitrectomy. In cases of aphakic vitrectomized eyes, there are reports of the implant traversing into the anterior chamber through either an iridotomy or the pupil.<sup>[7,11]</sup> Prone position, posterior capsule rupture, history of vitrectomy, and aphakia are recognized risk factors.<sup>[7,12]</sup> In a case in which a posterior capsule rupture occurred during cataract surgery and scleral fixation was performed, a dexamethasone implant was applied due to post-operative macular edema development. Migration of the implant to the anterior segment was observed 2 days after injection, following a flight.<sup>[13]</sup> Kocak et al.<sup>[15]</sup> reported a case of a dexamethasone implant migrated between the iris and PCIOL due to weak zonules.<sup>[14]</sup> In the literature, cases with posterior capsular integrity but migration of the implant through weak zonules have been described. In our case, a posterior capsule defect occurred during cataract surgery.

A dexamethasone implant that has entered the anterior chamber can be extracted through a corneal incision or repositioned into the posterior vitreous cavity.<sup>[16]</sup> In addition, there have been reports of the dexamethasone implant spontaneously returning to the vitreous cavity.<sup>[15]</sup> Guiding the implant into the vitreous cavity by placing the patient in a supine position after pupil dilation has been described in the literature. Kang and colleagues retrospectively analyzed 924 cases of Ozurdex implantation, finding that anterior chamber migration occurred in 4

patients.<sup>[17]</sup> Among these, surgical removal was necessary for two patients, while the other two were repositioned into the posterior vitreous.<sup>[17]</sup> In our case, we believe that the anterior chamber migration occurred primarily due to the posterior capsule rupture that occurred during complicated cataract surgery.

According to Khurana et al.,<sup>[7]</sup> they observed the development of corneal edema when migration into the anterior chamber occurred within the initial 3 weeks following dexamethasone implantation. However, they noted the absence of corneal edema when migration took place between 5 weeks and 3 months after implantation. In our case, minimal corneal edema was present, and migration into the anterior chamber occurred within the first 3 weeks. Sometimes patients can be asymptomatic, and it should not be forgotten that a careful examination is necessary. Because it has been observed that as the duration between symptoms and surgical removal of the implant increases, the risk of permanent corneal edema increases, and there is a greater need for corneal transplantation.<sup>[7]</sup>

## Conclusion

It is important to be aware of the rare risk of anterior chamber migration, particularly in patients with posterior capsule rupture, following dexamethasone implantation. Surgeons should be knowledgeable about methods for the easy removal of the implant from the anterior chamber.

**Informed Consent:** Written informed consent was obtained from the patient for the preparation of this work.

**Peer-review:** Externally peer-reviewed.

**Author Contributions:** Concept: E.A.; Design: E.A., F.A., K.T.; Supervision: E.A., F.A.; Resource: E.A., K.T.; Materials: E.A., F.A., K.T., A.Y.; Data Collection and/or Processing: F.A., K.T., A.Y., İ.E.; Analysis and/or Interpretation: E.A., F.A., İ.E.; Literature Search: E.A.; Writing: E.A.; Critical Reviews: E.A., İ.E.

**Conflict of Interest:** None declared.

**Use of AI for Writing Assistance:** Not declared.

**Financial Disclosure:** The authors declared that this study has received no financial support.

## References

1. Kuppermann BD, Blumenkranz MS, Haller JA, Williams GA, Weinberg DV, Chou C, et al. Randomized controlled study of an intravitreal dexamethasone drug delivery system in patients with persistent macular edema. *Arch Ophthalmol* 2007;125:309-17. [\[CrossRef\]](#)
2. Haller JA, Bandello F, Belfort R Jr, Blumenkranz MS, Gillies M, Heier J, et al. Randomized, sham-controlled trial of

- dexamethasone intravitreal implant in patients with macular edema due to retinal vein occlusion. *Ophthalmology* 2010;117:1134-46. [\[CrossRef\]](#)
3. Rahimy E, Khurana RN. Anterior segment migration of dexamethasone implant: Risk factors, complications, and management. *Curr Opin Ophthalmol* 2017;28:246-51. [\[CrossRef\]](#)
  4. Meyer LM, Schönfeld CL. Secondary glaucoma after intravitreal dexamethasone 0.7 mg implant in patients with retinal vein occlusion: A one-year follow-up. *J Ocul Pharmacol Ther* 2013;29:560-5. [\[CrossRef\]](#)
  5. Güler HA, Örnek N, Oğurel T, Yumuşak ME, Gökçınar NB, Örnek K. İntravitreal deksametazon implant (Ozurdex®) uygulamasının göz içi basıncı ve ön kamera açısına etkileri. *J Glaucoma Cataract* 2018;13:110-16. [Article in Turkish]
  6. Coca-Robinot J, Casco-Silva B, Armadá-Maresca F, García-Martínez J. Accidental injections of dexamethasone intravitreal implant (Ozurdex) into the crystalline lens. *Eur J Ophthalmol* 2014;24:633-6. [\[CrossRef\]](#)
  7. Khurana RN, Appa SN, McCannel CA, Elman MJ, Wittenberg SE, Parks DJ, et al. Dexamethasone implant anterior chamber migration: Risk factors, complications, and management strategies. *Ophthalmology* 2014;121:67-71. [\[CrossRef\]](#)
  8. Yılmaz T, Dikci S, Yeşilöz Ö, Tuncer İ, Fırat M, Genç O. Kazara lens içi deksametazon implant enjeksiyonu: İki olgu sunumu. *J Glaucoma Cataract* 2017;12:148-50. [Article in Turkish]
  9. Gonçalves MB, Alves BQ, Moura R, Magalhães O Jr, Maia A, Belfort R Jr, et al. Intravitreal dexamethasone implant migration into the anterior chamber: A multicenter study from the Pan-American Collaborative Retina Study Group. *Retina* 2020;40:825-32. [\[CrossRef\]](#)
  10. Pardo-López D, Francés-Muñoz E, Gallego-Pinazo R, Díaz-Llopis M. Anterior chamber migration of dexamethasone intravitreal implant (Ozurdex®). *Graefes Arch Clin Exp Ophthalmol* 2012;250:1703-4. [\[CrossRef\]](#)
  11. Stepanov A, Codenotti M, Ramoni A, Prati M, Jiraskova N, Rozsival P, et al. Anterior chamber migration of dexamethasone intravitreal implant (Ozurdex®) through basal iridectomy (Ando) in a pseudophakic patient. *Eur J Ophthalmol* 2016;26:e52-4. [\[CrossRef\]](#)
  12. Malclès A, Janin-Manificat H, Yhuel Y, Russo A, Agard E, El Chehab H, et al. Anterior chamber migration of intravitreal dexamethasone implant (Ozurdex®) in pseudophakic eyes: Report of three cases. *J Fr Ophtalmol* 2013;36:362-7. [Article in French] [\[CrossRef\]](#)
  13. Pacella F, Agostinelli E, Carlesimo SC, Nebbioso M, Secondi R, Forastiere M, et al. Management of anterior chamber dislocation of a dexamethasone intravitreal implant: A case report. *J Med Case Rep* 201;10:282. [\[CrossRef\]](#)
  14. Kocak N, Ozturk T, Karahan E, Kaynak S. Anterior migration of dexamethasone implant in a pseudophakic patient with intact posterior capsule. *Indian J Ophthalmol* 2014;62:1086-8. [\[CrossRef\]](#)
  15. Turaka K, Kwong HM Jr, De Souza S. Intravitreal implant migration into anterior chamber in a post-vitrectomy eye with central retinal vein occlusion and persistent macular edema. *Ophthalmic Surg Lasers Imaging Retina* 2013;44:196-7. [\[CrossRef\]](#)
  16. Bellocq D, Korobelnik JF, Burillon C, Voirin N, Dot C, Souied E, et al. Effectiveness and safety of dexamethasone implants for post-surgical macular oedema including Irvine-Gass syndrome: The EPISODIC study. *Br J Ophthalmol* 2015;99:979-83. [\[CrossRef\]](#)
  17. Kang H, Lee MW, Byeon SH, Koh HJ, Lee SC, Kim M. The clinical outcomes of surgical management of anterior chamber migration of a dexamethasone implant (Ozurdex®). *Graefes Arch Clin Exp Ophthalmol* 2017;255:1819-25. [\[CrossRef\]](#)